

(Practitioner's Docket No. IN-5554/BC0027)

REMARKS

1. **Rejection of claims 21, 23, and 25-37 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The basis of rejection with regards to claim 21 is that "...it is unclear how the "at least" language within lines 7 and 8 of claim 21 are to be interpreted. Since the two ethyl groups and the two hydroxyl groups are positioned according to the recited two number combinations, it is unclear how the additional substitution patterns denoted by "at least" are to be interpreted or explained. The existence of these additional patterns does not seem possible." (Office Action of 6/20/05, page 2)

Applicants and the Undersigned greatly appreciate the detailed basis of rejection and note that the foregoing amendment to claim 21 renders the rejection moot. Reconsideration and removal of the rejection is respectfully requested.

The basis of the rejection with regards to claim 30 is that "...it is unclear if "linear", "branched", "block", "comb", "random", and "core/shell" are each intended solely to modify the "microparticles" language. In other words, is the claim language to refer to structures other than different types of microparticles?" (Office Action of 6/20/05, page 2)

Applicants and the Undersigned greatly appreciate the detailed basis of rejection and note that the foregoing amendment to claim 30 renders the rejection moot. No new matter has been added with this amendment. Support for this amendment may be found on page 8, lines 11-21 of Applicants' Specification. As indicated therein, the claim language refers to structures other than different types of microparticles. The amendment to claim 30 is merely intended to clarify the claim language to reflect the cited portion of Applicants' Specification.

Reconsideration and removal of the rejection is respectfully requested.

2. **Rejection of claims 21, 27-31, and 33-37 under 35 U.S.C. §102(a) as anticipated by WO 00/15725 hereafter "725".**

The basis of rejection is understood to be as follows:

"The reference discloses polymeric coating compositions wherein diethyloctanediol is disclosed as a reactant. See

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page 15, line 10. Though the reference fails to disclose the particular isomer used, the claims are considered to be met despite applicants' argument, because the claims encompass all position isomers."

(Office Action of 6/20/05, page 3)

As a preliminary matter, the Undersigned notes that the cited reference does not appear to disclose a reaction product comprising at least two repeating units derived from a positionally isomeric diethyloctanediol monomer. It is noted that one of skill in the art will appreciate that the mere recitation of a component in a laundry list of ingredients does not indicate that a resulting reaction product contains at least two repeating units derived from that component. Moreover, it appears that the recitation on page 15, line 10 relates to the component c) of the varnish/poweder coating, i.e., at least one polyol c). Therefore, the cited reference does not appear to disclose the use of the polymerized reaction product of a positionally isomeric diethyloctanediol monomer.

Nonetheless, the Undersigned notes that Applicants' foreign priority date renders the instant rejection moot. The PTO's acknowledgement of the receipt of the certified copies of the priority documents is appreciated.

A copy of the translation of the certified priority document is being submitted under separate cover per MPEP 201.15 and 37 CFR 1.55 (a) (4). It is expected that upon the filing of the translation, Applicants will be entitled to rely upon the priority date to overcome the cited reference.

3. Rejection of claims 21, 27-37, 42 and 43 under 35 U.S.C. §102(b) as anticipated by DE 19826715 hereafter "715".

The PTO states:

"The reference discloses coating compositions derived from 2,4-diethyloctane-1, 5-diol. See abstract. Despite applicants' arguments, the abstract clearly discloses the curing of a polymerizable composition comprising the compound derived from 2,4-diethyloctane-1,5-diol, and the position is taken that the resulting polymer satisfies the "two or more monomer units" limitation. Despite applicants'

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remarks, the reference allows for polymerizing the argued diethyloctanediol derivative; therefore, the resulting polymer contains the argued monomer units."

(Office Action of 6/20/05, page 4)

Applicants greatly appreciate the detailed basis of rejection but must respectfully disagree in regards to the inventions of amended independent claim 21 and independent claim 42.

Applicants' claims 21 and 42 relate to a curable composition comprising a particular curable reaction product. Support for the addition of 'curable' to the claims may be found in the Specification on pages 18, line 16 through page 25, line 20.

In contrast, the composition of the '715 reference fails to disclose a curable composition comprising a curable polymerized reaction product of a positionally isomeric diethyloctanediol monomer. Rather, it discloses a composition wherein the diethyloctane diol or its EO or PO derivative is crosslinked with the 30 carbon reactive compound upon radiation curing. Thus, the composition only comprises a reaction product of diethyloctanediol monomer after the composition is cured. As such, the '715 reference fails to disclose a curable composition comprising a curable polymerized reaction product of a positionally isomeric diethyloctanediol monomer.

To constitute anticipation, all material elements of a claim must be found in one prior art source. *In re Marshall*, 198 U.S.P.Q. 344 (C.C.P.A. 1978). DE '715 fails to meet this standard.

For example, the English abstract of the cited reference indicates that the claimed reactive thinner results from the reaction of three components, i.e., 2,4-diethyloctane-1,5-diol or its derivatives; ethylene oxide or propylene oxide; and a reactive compound having up to 30 carbon atoms and an ethylenically unsaturated polymerizable group. The Examples on pages 4 and 5 of the German language patent DE 198 26 715 A1 appear to indicate that the disclosed reactive thinner is 2,4-diethyloktandiol-1,5-diacrylat (DEODDA). This molecule appears to contain only one unit resulting from a positional isomer of diethyloctanediol.

Thus, DE '715 fails to anticipate the invention of Applicants' amended independent claim 21 because it appears that the claimed reactive thinner of DE '715

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lacks two or more repeating units derived from a positionally isomeric diethyloctanediol monomer. It is similarly noted that DE '715 also fails to disclose the inventions of dependent claims 40 and 41, which respectively require from 2 to 15 repeating units and more than 15 repeating units.

Reconsideration and removal of the rejection is therefore respectfully requested in view of the foregoing amendments and remarks.

4. **Rejection of claims 21 and 27-31 under 35 U.S.C. §102(b) as anticipated by GB 778924 hereafter "924".**

The PTO states:

"The reference discloses polymeric compounds produced from 3,6-diethyl-1,8-octanediol. See page 4, lines 55 and 75-85. The position is taken that the skilled artisan would immediately envisage the use of the saturated diethyloctanediol within the disclosed polymers at page 4, lines 83-85. Furthermore, the position is taken in view of a polymer's definition requiring repeating units that the disclosed polymers inherently satisfy the argued "two or more monomer units" language."

(Office Action of 6/20/05, page 4)

Applicants greatly appreciate the detailed basis of rejection but must respectfully disagree in regards to the invention of amended independent claim 21.

A rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference. *In re Paulsen*, 31 U.S.P.Q.2d 1671 (Fed Cir. 1994).

In this case, the invention of amended independent claim 21 requires a curable reaction product comprising two or more repeating units derived from a positionally isomeric diethyloctanediol and having a molecular weight polydispersity Mw/Mn of from 1.1 to 20.

GB '924 is silent as to the need to have a specific reaction product having at least two repeating units derived from a positionally isomeric diethyloctanediol and a specific polydispersity.

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Moreover, it is respectfully submitted that the disclosure on page 4, lines 75-84 is not entirely clear. For example, it is not clear which glycol products are meant to be useful in the synthesis of drying oil types of polyesters. It is noted that most of the 'glycol products' disclosed in GB '924 are outside the scope of Applicants' claimed invention, including all products within the scope of the formula set forth on page 1 and claim 1 of GB '924, given that R₄ must be an alkenyl. Indeed, the sentence at lines 79-84 appears to indicate that only nonhydrogenated glycols are intended to be used in the synthesis of 'drying oil' types of polyesters, i.e., see lines 53-58. Such nonhydrogenated glycols do not appear to encompass Applicants' positionally isomeric diethyloctanediols.

As a result, it is respectfully submitted that GB '924 fails to anticipate the invention of Applicants' amended independent claim 21. Reconsideration and removal of the rejection is respectfully requested.

5. Rejection of claims 21, 23, 26-37, 42 and 43 under 35 U.S.C. §102(a) as anticipated by EP 940459 hereafter "459".

The PTO states:

"The reference discloses coating and adhesive compositions derived from various diethyloctanediols, including 2,4-diethyloctane-1,5-diol. See page 2 and claims."

Applicants greatly appreciate the detailed basis of rejection but must respectfully disagree in regards to the inventions of amended independent claims 21 and 42.

Applicants must respectfully disagree. A review of the Examples on page 9 appears to indicate that the diethyl-octandiol is used as a type of 'cold add' in Komponente II of a two component polyurethane. That is, the diethyl-octandiol does not appear to undergo polymerization to form a *curable* reaction product having two or more repeating units resulting from the polymerization of the diethyl-octandiol. Rather, the diethyl-octanediol only undergoes polymerization as a function of the curing of the composition. Thus, the '459 composition is not a curable composition comprising a curable polymerized reaction product of a positionally isomeric diethyloctanediol

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monomer. Rather, the '459 composition only contains a polymerized reaction product of a diethyloctanediol once it is cured.

To constitute anticipation, all material elements of a claim must be found in one prior art source. *In re Marshall*, 198 U.S.P.Q. 344 (C.C.P.A. 1978). It is respectfully submitted that EP '459 fails to meet this standard.

Reconsideration and removal of the rejection is therefore respectfully requested in view of the foregoing amendments and remarks.

Irregardless, the Undersigned expects that Applicants' foreign priority date renders the instant rejection moot. The PTO's acknowledgement of the receipt of the certified copies of the priority documents is appreciated.

A copy of the translation of the certified priority document is being submitted under separate cover per MPEP 201.15 and 37 CFR 1.55 (a) (4). It is expected that upon the filing of the translation, Applicants will be entitled to rely upon the priority date to overcome the cited reference.

6. Rejection of claims 21-39 under 35 U.S.C. §103(a) as unpatentable over Ott et al., (WO 00/15725), hereafter "Ott" or "725", or DE 19826715 , hereafter "DE '715", or National Distillers Products Corporation (GB 778924) hereafter "National Distillers" or "GB '924", or Bartol et al., (EP 0940459 (A2,A3)), hereafter "Bartol" or "EP '459".

It is the PTO's position that it would have been obvious to utilize any isomer of diethyloctanediol in the production of polymers, based upon a teaching of the individually cited references.

Applicants appreciate the detailed basis of rejection but must respectfully disagree.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143.

This standard is not met with any of the above individually cited references.

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Most particularly, Applicants must respectfully submit that the inventions of claims 21 and 42 require more than a suggestion to use a diethyloctane monomer in the production of polymers. Rather, as noted above, Applicants' claimed invention centers on a curable composition that contains a curable polymerized reaction product of a positionally isomeric diethyloctanediol monomer, i.e., a polymerized reaction product being one containing two or more monomer units.

Thus, the fact that a diethyloctane monomer was polymerized as a result of the curing of prior art coating compositions is irrelevant in regards to patentability of the instantly claimed compositions. That is, such cured compositions fail to disclose or suggest Applicants' claimed curable composition comprising a curable reaction product comprising two or more monomer units of diethyloctane monomer.

Indeed, as previously noted, the crucial factor is what effect such obviousness of structure has upon the obviousness of the subject matter as a whole, since structural obviousness alone is not a bar under 35 U.S.C. §103 to the grant of a patent on a chemical compound. *Comr. Pats. v. Deutsche Gold-und-Silber, etc.* 157 U.S.P.Q. 549 (C.A.D.C. 1968). In this case, the prior art compositions fail to disclose a curable composition that relies upon a curable reaction product of diethyloctanediol monomer.

A prima facie case of obviousness based on structure exists if the prior art suggests to one of ordinary skill in the art to make the substitution or modification. *In re Taborsky*, 183 U.S.P.Q. 50 (C.C.P.A. 1974).

In addition, as noted above in Sections 3, 4, and 5, hereby incorporated in their entirety, each of the cited references fails to disclose Applicants' requirement of a reaction product comprising two or more repeating units. No additional references have been cited by the PTO to correct these identified deficiencies. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (C.C.P.A. 1974); MPEP 1243.03.

Finally, nothing in any of the individually cited references provides the motivation to require Applicants' specific reaction product having a particular polydispersity. The prior art must provide one of ordinary skill in the art the motivation to make the

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proposed molecular modifications needed to arrive at the claimed compound. *In re Lalv*, 223 U.S.P.Q. 1257 (Fed. Cir. 1984).

In the absence of any motivation to do what Applicants have done, it is respectfully submitted that each of the individually cited references fails to provide a *prima facie* case of obviousness. Reconsideration and removal of the rejections is respectfully requested.

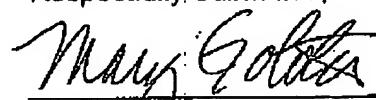
7. Request for Interview.

Applicants hereby respectfully request an interview prior to the preparation of an Office Action.

CONCLUSION

Applicant(s) respectfully submit that the Application and pending claims are patentable in view of the foregoing amendments and/or remarks. A Notice of Allowance is respectfully requested. As always, the Examiner is encouraged to contact the Undersigned by telephone if direct conversation would be helpful.

Respectfully Submitted,



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